

West Africa Trends

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Building Bigger, Better Gateways

The future of West Africa's ports and harbors

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Introduction

Handling about 90% of the trade, ports are an important element to West African economies. They have proved even more important in the last few years as the region has seen good economic growth fuelled by commodity exports. As a result, trade has grown much faster than regional port capacities. This has created a situation where ports have become increasingly congested. The 3rd Africa Ports Conference, which was held in Ghana in March 2012, emphasized that West African ports face serious challenges in productivity, efficiency, and sustainability.

Given the importance of commodity exports in the region, the need to import many of the inputs required for local industry, and the growing imports of consumer goods, the urgency for port efficiency improvements reverberates across all West African economies.

With world trade poised to double in the next 15 years, and the growing importance of the region as a supplier of key commodities, the pressure to accommodate larger ships will continue to mount, and with it the need to modernize the region's ports.

Fortunately, the drive towards modernization is already happening but the model that countries are using poses challenges. Port development is being skewed towards cargo ports, neglecting fishery port development, even though it is a sector with high-unexploited potential for job creation. Another issue that is being neglected is how to address the way ports negatively affect marine and coastal environments. In this issue, we explore each of these trends and emerging difficulties by looking at the major trend in port development, exploring commercial fishing port development and what they mean for artisanal fishing, as well as the environmental issues surrounding ports ■

The purpose of this newsletter is to monitor trends across the West Africa region for policy makers, researchers and other decision makers in the international community.

Disclaimer: *The views expressed in this newsletter do not represent those of the Rockefeller Foundation.*

Editorial

Ports are key to economies of the region as they facilitate trade—the lifeblood of any economy. Ports also provide good jobs and attract industries. A well thought out port development plan can thus play an important role in reducing poverty. The huge growth in trade and projected future growth has put unprecedented pressure on governments to upgrade their chronically underperforming regional ports.

The good news is that many countries are rising to the challenge, with many port expansion and upgrade projects currently underway. Because governments are resource-constrained, they have chosen the path of concessioning port operations to private companies as the preferred model. As such, private investors and operators are running these projects. Almost all countries in the region have some type of concession ranging from outsourcing container terminals to fully concessioning all port operations and development.

This bodes well for the future of the region. Indeed ports have become more efficient and investments for upgrades have increased. However there is concern about the trend towards concessioning, as a few global giants now dominate the sector. Two or three global port operators currently control all ports in the region—in essence creating a monopoly. Because national port authorities fully disengage from operations, critical port operating skills are becoming fully vested in these few parties. In the long run, government agencies will lack competencies for managing their ports, and at the end of concession periods, they will also lack any credible “bargaining threat” to reassume control of them. Thus, concessions may become permanent. While one can argue that governments could always bring in new operators, experience in Cote d’Ivoire has shown that existing operators become entrenched and tend to have an upper hand over competitors. Also, the loss of national control means that any leverage governments possess to steer port development in ways that meet developmental goals may be lost. Indeed port concessioning in Nigeria cut over 10,000 jobs (though it is possible that there was over-employment during government tenure). A middle path model where governments form a joint venture with private firms—as is the case in Ghana—may prove to better suit countries’ developmental needs.

Beside mainstream ports, fishing ports constitute an aspect of ports infrastructure deserving better investments. Fishing is a key economic sector and the region is well endowed with fish resources to support a com-

mercial industry. But commercial fishing port development has lagged behind, and as result commercial fishing is done by foreign fleets that process their catch elsewhere, then export the processed fish back to West Africa. The opportunity to develop a commercial fishing fleet that can substitute this type of import, and at the same time export fish, is being squandered. Fish ports deserve greater attention with a balance between commercial and artisanal fishing infrastructure, as the artisanal sector is a key employer of the poor.

It is also worrying that the frenzied activity in expanding ports is taking place in an environment where ports already lack the capacity to meet their obligations on environmental protection. While authorities seem to be waking up to the call for greater environmental concern, the current focus on port expansion overlooks the need for parallel projects to address negative environmental effects.

However, there is a silver lining. Environmental and sustainability issues are now central concerns in economic activities, and as key nodes, pressure will increasingly be placed on ports to comply with globally accepted standards. Through their supply chains, global retailers like IKEA and Wal-Mart are already using their buyer power to demand sustainable practices by their supply chain partners, with particular emphasis on their shippers. Port operators have already begun to receive requests from shippers for carbon footprint data to meet their customers’ requests.

As regional ports become more integrated in world economies, pressure for better environmental performance will increase. In the short run, shippers and ports in the region may not feel this pressure because as a region that exports mostly commodities, and very little manufactured consumer goods, it is not part of the supply chains of major global retailers. However, as environmental awareness spreads, consumers might demand that retailers ensure their suppliers are also green.

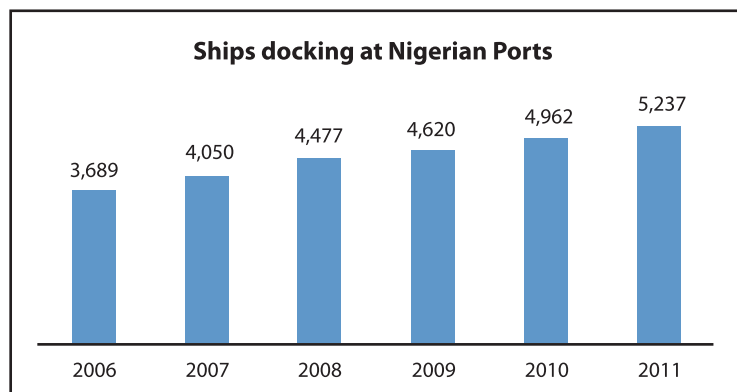
Africa’s ports need not wait for pressure to become sustainable, as port pollution first and foremost affects the local population and environment. Efforts to control sea pollution is for the global common good, and ports should be at the forefront, as they are the only place for the shipping industry to dispose of waste in an environmentally sound way.



Recent Trends in Port Development

The last decade has seen significant economic growth in the region, mainly powered by (among other things) a rise in world prices of the region's main commodity exports. Naturally, this surge in export-led growth has been associated with an even faster rate of growth in trade, as imports have also surged. As a result, demand on the region's ports have been significant, as 90% of the trade in West Africa passes through ports.

Available statistics show that in 2006, 3,689 vessels called Nigerian ports, and grew to 5,327 by 2011, translating to 15.2% growth per year. This has far outstripped growth in port capacity. The result is that the capacity of Nigeria's seaports is over stretched by 128%. Their installed capacity is between 40-45 million metric tons, while the actual volume handled at these ports exceeds 100 million metric tons.



Source:http://www.businessdayonline.com/New/index.php?option=com_content&view=article&id=52565:nigeria-needs-new-terminals-to-handle-growing-cargo-volume--maersk-trade-report&catid=88:maritime&Itemid=771

Overstretched port facilities are not unique to Nigeria. Lomé port, in Togo, which was originally designed for annual traffic of 400,000 tons of various goods, now deals with more than 7 million tons of freight. Across the region, ships experience long delays, where vessels must wait several days for a berth. The average dwell time in the region's ports is 20 days, whereas the global benchmark is 7 days.

Shallow water ports and facilities further compound

this situation. The result is that larger ships cannot dock in the region. Instead, ports are inefficiently clogged with small ships. This inefficiency has residual effects: the longer a vessel spends in port, the greater the shipping costs and delays to business and other economic players that need goods to move. This is detrimental to trade, as it limits the competitiveness of local businesses. An added cost of higher ship traffic is higher emission of local and global pollutants that come with ships (see story on ports and environment).

Instability has also caused capacity loss for conflict countries. In recent years, traffic volumes at the Port of Dakar, in Senegal, have increased as the crisis in Côte d'Ivoire has forced Mali and Burkina Faso to shift trade traffic from Abidjan. The result is that Dakar is now emerging as a key alternative corridor in West Africa.

Impact

Port congestion benefits a few and negatively affects economies. The widespread congestion at the region's ports is costly for its economies and consumers. Congestion implies high operations costs, which are eventually passed on to the consumer (typically a low-income household or a struggling local entrepreneur). A perverse outcome of this is that a few people benefit from this situation. A recent conference in Ghana pointed out that long dwell times at ports are beneficial to some stakeholders and thus there is some resistance to increasing efficiency. Long dwell times allow importers to use the ports to store their goods (which saves them from investing in warehouses and go-downs). And since many domestic markets are dominated by monopolies, they can pass the higher storage costs to consumers. The importer has a further incentive to keep the cargo dwell times long as a way of deterring entry of other traders; and given that many capital goods and other raw materials used by local industries come through these ports, the net result is uncompetitive local industries that cannot create needed jobs to alleviate poverty. Port inefficiency effectively allows a select group of traders to have a captive internal market.

Shallow ports are hurting the region's industrialization. The presence of deep ports is a major driver of development as trade is central to economic growth. Deep seaports are particularly important given that the need to move heavy equipment becomes imperative with industrialization. Indeed international investors give priorities to locations where essential infrastructure such as deep-sea ports, are readily available when making decision on where to invest. And investments are critical in creating jobs. The growth of Nigeria's sugar refining industry, which is now capturing the regional market, has been made possible by ports that provide needed infrastructure to import raw materials and export their refined sugar. One investor, Olam, makes the point that a port-based sugar refinery enjoys cost and logistics advantages as compared to an inland facility. Such a refinery also enjoys better access to importing markets within the region and the rest of Africa. Indeed efficient ports are a critical advantage in many high-volume low-margins industries such as many West African food and agro-processing where they have untapped comparative advantages with their raw materials, such as cocoa and fruit. Indeed Singapore is a major hub for food and agro-processing industries primarily because of its excellent ports. Therefore, a development strategy that has efficient ports as a key pillar is needed if the region's economies are to transform and generate needed manufacturing jobs.

Interventions

While no port in the region stands head and shoulders above the rest, there are efforts by various countries to become more competitive. For many, a major prize at stake is to become the port of choice for the landlocked countries in the region. Five landlocked economies in the region and others in Central Africa typically depend on West Africa's ports for their imports and exports.

Below, we note some recent strategies to enhance port competitiveness.

Concessioning

This is perhaps the most dominant trend. Governments in the region are retreating from operating ports and handing them to private operators. A few global operators seem to be the choice; namely Dubai Ports World (DP World), AP Moller-Maersk Group -APM Terminals and Bollore. To date APM Terminals is the largest operator in West Africa, with a presence in nine existing facilities in the Ivory Coast, Liberia, Benin, and Nigeria. APM Terminals Inland Services in the Ivory Coast also has locations in Abid-

jan and San Pedro.

Some recent concessions include:

- DP World has completed the Dakar Container Terminal with handling capacity of 600,000 twenty-foot equivalent units (TEU) per year and will now operate under a 20-year concession.
- AP Moller-Maersk Group had, through its Nigerian subsidiary, APM Terminals Apapa Limited, won the concession for Apapa Container Terminal, Appapa Nigeria, Africa's largest container terminal.
- Freeport of Monrovia has been parceled to four concessions: Firestone, China Union, Western Cluster, and APM Terminals. Those concessions occupy 85% of the port's property, while the Liberia ports authority retains 15%.

In most of these concessions, governments hand over all essential port operations concerned to the private operator, with the government port authority playing the role of regulator. The exception seems to be Ghana, where the Ghana Ports and Harbors Authority (GPHA), has partnered with Ballore to form Meridian Port Services (MPS), a joint venture. Since 2007, MPS has been managing the container terminal at the Tema Port.

For the most part, concessioning has been good for countries. It has brought in needed investment and managerial knowhow to increase port efficiency. For instance AP-Moller has injected a total capital investment of US\$330 million into the Apapa Terminal since the start of the concession, while MPS has invested about US\$100 million into the container terminal after taking over its operations from the Ghana Ports and Harbor Authority (GPHA). As a result, concessions seem to have improved the efficiency of regional ports. A World Bank study found a 60% improvement in efficiency; with concessioner ports averaging 16 moves per hour compared to 10 moves per hour at non-concessioner ports.

Indeed the concessions may also herald the era of deep ports. In Nigeria, APM Terminals plans to build a deep-water port at Badagry, 34 miles west of the commercial capital of Lagos, by 2016. The port, with initial container capacity of 1 million 20-foot-equivalent container units, will also include facilities for bulk, liquid bulk, roll-on, roll-off and general cargo, as well as a barge terminal and oil and gas operations. When completed, the port will be one of the largest in Africa, with 4.4 miles of quay and 2,470 acres of dedicated yard. The free trade zone will include a power plant, an oil refinery, an industrial park, warehousing, and an inland container depot.

Despite the positive gains, concessions have not been without problems. Notably, corruption has often been alleged in the award of deals. The Cote d'Ivoire Chamber of Commerce expressed reservation about the award of concession of Virdi Container Terminal to the Bollore group, as it was designated behind closed doors without other parties being invited to tender.

Leveraging Extractive Industries

The opening of new mines is also facilitating the expansion and development of ports to enable the export of mining commodities. The operation of African Minerals in Sierra Leone is a good example. The company, which exports iron ore from its Tonkolili mine, 200 km east of Freetown, transports all its output along the Pepel-Marampa Railway and then via the port of Pepel, both of which are operated by African Minerals under 99-year concessions.

Dry Ports

Inland dry ports are also being constructed to ease congestion at the seaports. In 2006, Burkina-Faso undertook the construction of the dry port of Bobo-Dioulasso. It includes a multimodal platform for national and international freight. The dry port of Bobo-Dioulasso aims to meet the growing demand of truckers for goods storage. There are also plans to add a "free port", which will develop 80 hectares to accommodate processors of products for export.

West African Optimized Ship

Shipping companies are also being more innovative. Maersk line has developed a special ship called WAFMAX (West Africa Max) that has been optimized to the size of West African ports. These ships are larger than standard ships. The WAFMAX vessels carry more than twice as much cargo as most other ships calling ports in West Africa, and were designed to address the current capacity constraints in the major West African ports and terminals.

Maersk Line is in the process of delivering 22 WAFMAX ships. Since June 2011, 9 of the WAFMAX vessels have been in operation, serving customers in the Far East to West Africa trade. The remaining 13 vessels will be put in operation by the end of 2013.

A study has found the impact of WAFMAX as follows:

- Will enable increased port productivity of up to 20% in Apapa, and 12% in Tema by 2013 – equivalent to approximately one waiting day less per vessel call.
- Will enable importers and exporters calling Apapa and Tema to save up to US\$131 million and US\$80

million respectively from reduced inventory and congestion costs.

- Will lead to a potential trade increase of up to US\$760 million in Apapa and US\$490 in Tema.
- Will reduce harmful sulphur emissions in the ports of Apapa and Tema, by 20% and 13% respectively, while reducing the relative CO2 footprint per container by up to 30%.

Twining

San Pedro port (Côte d'Ivoire) has been integrated in a network with the port of Anvers (Belgium), the second largest port in Europe. This makes San Pedro port the representative of Anvers in Africa. This partnership agreement covers technical assistance, investment, training, and development of trade relations of the port. The partnership will give three scholarships every year to the port staff to upgrade their skills.

This twining will see the development of the port that will allow it to handle 10 twenty-foot equivalent units (TEUs), and allow San Pedro port to upgrade its activities in line with international standards.

Twining with Avers is critical for Cote d'Ivoire as Cote d'Ivoire is the world's leading cocoa producer, and Anvers is the world's leading port for cocoa beans exports.

The Future

Ports directly employ thousands of workers and have the potential to create many more jobs. The development of Nigeria's US\$1.5 billion Lekki Deep Seaport (Phase I) is expected to create up to 10,000 direct and indirect jobs during the construction period while over 169,000 direct and indirect jobs will be generated when it is fully operational.

But more importantly, ports have an even more crucial indirect impact on employment because they provide critical infrastructure that can lower business costs, and thus help create jobs. Ports also provide facilities for entrepreneurs and investors to set up job-creating industries. In a number of countries, there are industrial parks, such as the Tema free zones in Ghana, and in Nigeria, sugar refineries have been attracted by good port locations. However there is still much work to be done.

Currently port development seems to rank high on the agenda of many governments. This is likely to continue as trade is set to grow. Also, as the region discovers new resources (oil and minerals), the need for larger ports will become critical.

But while port development will continue, there are concerns that concessioning to multinational private port operators may come with serious negative effects. Some domestic stakeholders have argued that the model effectively removes critical skills from the public sector. There is fear that after the expansion concessions expire, most operational skills will remain with foreign owned companies; which will mean that national ports authorities will lack the capability to run their ports. Governments will have to continue concessioning the ports, making the handover more or less permanent. In such circumstances, the concessioner may have more bargaining power.

The trend is also creating a situation where a few operators are slowly gaining monopoly power over the regional ports. Losing bidders for a concession of a new terminal at Abidjan lodged this complaint when the new contract was awarded to a concessionaire already running a terminal at the port. It is now apparent that the two key operators APMT and DP World are forging what amounts to a partnership with the long time African port operator, Bolloré, operating together at various locations on the West African coast.

The current concessioning model has caused job losses following takeover. There have been complaints that over 10,000 workers lost their jobs in Nigeria because of concessioning. Given the job losses, as well as the fact that container-handling costs have gone up drastically from N750 to N5000, some stakeholders have complained that the concessioning approach has not made the Nigerian ports competitive. Obviously, there are tradeoffs: while private management has led directly to job losses the resulting increased efficiency may translate into jobs elsewhere as cost of business is lowered.

There is cause for worry that when a few large multinational operators run the ports of the region, the development agenda of ports may be compromised as firms seek to maximize their returns. The governments' ability to use policy to intentionally steer port development and operations in ways that creates jobs may be lost. Perhaps the model used in Ghana, where the ports authority has formed joint venture with operators, promises a better future in terms of government leverage.

There may be no major direct benefits for the poor resulting from efficient ports, but indirectly there are. Efficient ports usually mean that imports can enter a country much cheaper. However, while cheap imports—especially of food and basic items—may be good for the poor's consumption needs, they also pose threats to many local industries in which the poor are

employed, such as agriculture-related industries.

Beside the threat to local industries, port expansions can also displace the less powerful. A case in point is the plan to build a palm oil refinery in Ghana's Tema port on the land that local artisanal fishing industry uses as a landing beach. This has sparked major protests and even deaths as fishermen contest the action by the Tema port authority.

Box 1: Vehicular Traffic Congestion at Ports

Port inefficiency in the region extends to goods clearing and transportation. Trucks wait many days for goods to go through the clearing process. Lack of coordination among the many authorities that run ports are key challenges. For instance in Nigeria, the Nigeria Customs Services, National Environmental Standards Regulatory Agency (NESREA), National Drug Law Enforcement Agency (NDLEA), Federal Road Safety Corps (FRSC) and other agencies at the seaports all demand to inspect goods, causing undue delays.

To reduce these delays the Ghana government agency, GCNet, has an automated system to ensure the smooth processing of customs documentation to ensure accuracy of information and to shorten the port clearing process. However, this paperless transaction system has not been very successful due to the lack of training and re-training of custom staff to be conversant with it. GCNet is responding and has been organizing training for persons engaged in the system.

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Fishing Ports

Commercial vs. Artisanal Fishing – Which Way?

With 6,069 kilometers of coastline and a maritime Exclusive Economic Zone of 2,016,900 square kilometers, the region counts among the best-endowed fishing grounds in the world. This is largely due to an upwelling along the coast of Senegal and Mauritania and the Gulf of Guinea. In addition to providing revenue to governments through royalties and other fees collected under various fishing agreements, fishery resources play an important role in meeting the nutritional needs of populations with low purchasing power, as well as providing full time employment to more than 3 million West Africans (more than 10 percent of the region's workforce).

However, the fishing industry is confined to the artisanal sector, as the region lacks a strong commercial fishing sector. The result is that foreign vessels do most commercial fishing either under license, or illegally. The region itself exports very little fish, while commercial quantities caught by foreign vessels are processed elsewhere and imported back to the region.

The value-added processing sector within the fishing industry, which includes canning, filleting, and peeling, is in a state of relative underdevelopment or non-existence in some West African countries. These are lost opportunities for both export and import substitution.

The key drawback to developing a commercial fishing sector is the lack of adequate ports. Commercial fishing ships cannot dock and process their West African catch in many of the ports across the region. A case in point is the Gambia, where the industrial (commercial) fleet is composed of foreign owned fish, mainly cephalopod trawlers. The Gambia does not have a port for vessels to offload. These vessels land their catch in foreign ports where the fish is processed, packaged, and labeled as products originating from those foreign ports. As a result, the industrial seafood processing plants in The Gambia rely on fish

from the artisanal fishery for processing and export. Consequently, they are operating far below capacity and thus are uncompetitive.

The need for commercial fishing ports has been appreciated and a number of efforts are underway to develop special purpose fishing ports in several countries.

Major Interventions

Ghana is planning to build a number of fishing ports to improve the livelihoods and practices of artisanal fisher-folks and communities in at least 11 coastal towns and cities. The new mini-ports are to be sited in Axim, Dixcove, Mumford, Moree, Elmina, Winneba, Senya-Beraku, Gomoa-Fete, James Town, Teshie, and Keta. Besides the basic marine infrastructure of break waters and berthing bays for boats and canoes, each of the 11 sites would also get such facilities as ice-making plants, day-care centers, fish market sheds, net-mending areas, and offices. The anticipated impact is that the quality and handling of landed fish and other sea foods will improve considerably.

Guinea Bissau has a new fishing port that has the capacity to dock four large ships. It also has a market, refrigeration facilities, a laboratory, and areas for private business-people that want to invest in the sector. The port will make it possible for "large trawlers" to anchor in Guinea Bissau, from where they can export the country's fish. The plan is to have Guinea Bissau obtain European Union hygiene certification so the country can export its fishing products to the European market. This project was funded by Africa Development Bank (AfDB) at a cost of EU 10 million.

The Gambia is in the process of completing an artisanal fishery development project, which involves constructing a fishing jetty in the capital, Banjul. When finished, the new jetty will be used by both artisanal and industrial operators, and will provide access to at least 20 industrial fishing vessels and 150 canoes. It is expected to support over 2,000 fishermen, women fishmongers, and private

operators, and will provide access to at least 20 industrial fishing vessels and 150 canoes. It is expected to support over 2,000 fishermen, women fishmongers, and private operators. The Gambia is also rehabilitating three inland fish landing sites at Bintang, Tendaba, and Albreda to be managed by Community Fisheries Centre committees. The projects will benefit over 2,000 fisher folks at the three inland landing sites, which are expected to increase the quantity landed fish by 1,500 tons.

Fishing port projects are also currently being pursued in Cape Verde, Liberia, Senegal, and Sierra Leone under a World Bank supported West African Regional Fisheries Program (WARFP). According to the WARFP program document, the projects are designed to “support the development of basic infrastructure in several communities for fish landing site clusters. These will consist of basic works to establish small jetties or landing sites for offloading fish products, supported by an integrated package of services around the sites for processing the products.”

The Robertsport fish landing site cluster in Liberia for example, will have basic infrastructure such as a jetty, an elevated water tank, repairs of existing water pipes, the installation of a water pipe to the Fanti communities, a solar-powered pump, and the extension of solar street lighting. The program will also support the construction of a hygiene block and septic tank, an ice plant, cold stores, the gradual development of a dry-docking industry, common service centers, and extension services such as a fishery material store, fuel and gas, net and crate repair, and training in the maintenance of the cold chains.

Box 2: Absence of modern fishing ports a factor in the rise of illegal commercial fishing

Illegal commercial fishing is common in the region and this has negatively affected the artisanal fishing sector, as illegal vessels have been over-fishing, thus depleting fishing stock.

According to a 2012 report by the Environmental Justice Foundation, (Illegal Fishing Exposed: The Fight Against Illegal Fishing in West Africa and the EU) West African waters are estimated to have the highest illegal fishing in the world, representing up to 37% of the region's catch. Global losses due to illegal, unreported, and unregulated (IUU) or “pirate fishing” are estimated between US\$10 billion and US\$23.5 billion per year.” Between 1st January 2010 and 31st July 2012, a community surveillance project in southern Sierra Leone received 252 reports of pirate fishing by

industrial vessels in inshore areas. Environmental Justice Foundation (EJF's) local staff filmed and photographed 10 different vessels operating illegally, transmitting the evidence to the Sierra Leone Government and European authorities. Nine out of 10 of the vessels are accredited to export their catches to Europe. Along with the economic losses, pirate fishing in West Africa severely compromises the food security and livelihoods of coastal communities. In Sierra Leone, fish represents 64% of total animal protein consumed in the country, and an estimated 230,000 people are directly employed in fisheries.

Perhaps a large local commercial fleet would stem illegal commercial fishing in the region. A local industry will have commercial interests to protect and are likely to pressure necessary government agencies to take action. One of the factors that have impeded a competitive domestic fishing industry has been the lack of fishing ports and modern landing sites capable of attracting investments into the sector and boosting modern business practices. Building more fishing ports and modernizing existing landing sites should constitute a major plank of any interventions to stem the menace.

The future

A balanced approach to meeting artisanal and industrial needs: The above interventions may give us some insight into how fishing ports in the region may evolve over the next decade. It is clear that governments seem to be pursuing a balanced approach that caters to the needs of both artisanal and industrial operators. The Gambian project, which will cater to at least 20 industrial vessels and 150 canoes, is an example of this approach. Generally this is an approach that makes sense: the sector may be dominated by artisanal operators but there is need to also build capacity for industrial-scale vessels and operations to help increase productivity, modernize the sector, and boost export potential.

Artisanal ports will dominate investments: Despite the efforts by governments to pursue a balanced approach in port development with projects that provide for both industrial and artisanal operators, artisanal operators will continue to dominate the sector due to their numbers and political influence. In fact, governments may continue to limit their project ambitions to the immediate concerns of artisanal operators. While this will make economic sense at one level, it will be disappointing on another level. The desire to see ports with the capacity to support commercial fishing for import substitution and export will proceed at a much slower pace. In Senegal, which is home to the region's two largest artisanal fishing ports, the new government elected in May 2012, cancelled 29 fishing authorizations granted to foreign fishing vessels.

While this will protect artisanal operators, it might also mean that the country's fishing ports will remain limited by the small-scale ambitions of the artisanal sector. Efforts should be directed at upgrading the artisanal sector so that it can participate in the more lucrative commercial fishing.

Continued invasion of foreign illegal fishing may provoke investments in industrial-scale ports: The increasing presence of foreign vessels in the region's waters, including illegal ones, is likely to provoke a major shift in national strategies that may involve major port investments to spur local investors and more legal foreign investment. Already there are calls from domestic industrial groups for governments to pursue this line of intervention as the best solution to the menace of foreign vessels displacing locals. Much of the influx of illegal fishing can be blamed on the fact that the absence of modern port facilities has discouraged the emergence of a domestic industrial fishing sector capable of competing with foreign fleets and with the clout to press governments to take action. While these may be leading factors for the rise of illegal fishing, the increasing activity of these vessels may also provoke or accelerate the development of more modern fishing ports that can support the emergence of domestic fishing giants.

Financing sources may prove unreliable: A major challenge confronting governments in the region has been how to raise funding to support new port construction. Virtually all projects are being sponsored by external agencies; the projects in the Gambia and Guinea Bissau are funded by the African Development Bank; the WARFP projects in Cape Verde, Sierra Leone, Liberia, and Senegal by the World Bank; and Ghana's projects by the Government of China. If any of these funding sources should prove unsustainable, it is unclear whether governments will be willing to self-sponsor. Indeed the projects in Ghana have delayed for about two years following difficulties with securing promised funds from the Chinese government. Also, it is likely that funding for some of the projects under the WARFP may be cancelled, as revealed in the most recent WARFP program appraisal report on the World Bank's project website.

Joal-Fadiouth: West Africa's largest artisanal fishing port

Joal-Fadiouth is one of the most important fishing ports of Senegal, and the largest artisanal fishing port in West Africa. Every step of the fishing process is handled in the traditional manner. For example, the fishermen use pirogues, which are flat-bottom

wooden boats small enough to easily take on land. Before exported to neighboring countries, the fish are dried on hundreds of wooden shelves in the pungent "fish drying zone" in the eastern part of the village. This zone covers acres of land.

Like clockwork, the Joal-Fadiouth covered fish market is overwhelmingly crowded at five o'clock in the evening, when the fishermen get back from their pirogue adventures. Locals and tourists alike jockey for their share of the fresh catch. The market is on the right side of the village close to the beach, while the drying zone is to the east.

Impact

All over the world, fishing ports make a big difference to local and national economies by supporting jobs and attracting investments to the sector. A fishing port is the critical infrastructure at the heart of any domestic fishing industry, and in West Africa port construction and rehabilitation will spur investment and help transform the sector.

Ports will spur job growth – the over 3 million West Africans who are currently employed in the sector are mostly artisanal operators making ends meet with limited and undeveloped port infrastructure. If more modern fishing ports are developed, they expand ports and landing capacity and will bring in more investments that should create more jobs. Because fishing ports are also typically hubs for processing, marketing, and distribution, new modern ports that integrate these capacities are likely to help create new employment hubs in localities and expand existing ones.

Rising productivity and incomes – A major impact of new fishing ports will be a boost in productivity and incomes for fisher folk. In the Gambia, it is expected that within three years of completion, the new Banjul jetty and renovation of the three inland landing sites, annual landings of "bonga" fish will increase by 2,500 tons and industrial fishing landings by 1,500 tons. With such productivity gains, annual incomes of fisher folks are projected to increase by 20% also in first three years. In addition, the new Banjul jetty is expected to help double the country's fish exports in the first three years. In countries with greater potential, port developments can be expected to yield even more gains.

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West African Ports and the Environment: Not There Yet

While ports play an important role in growing the economies of the region, they have significant negative effects on the environment. Environmental challenges are particularly acute at ports, as both sea and water pollution coexist, making a potentially toxic situation if the issue is not well managed.

The regional ports are confronted with a number of environmental challenges, which authorities have yet to confront. At the first conference of Ports Environmental Network-Africa (PENaF) held in 2010, the key environmental challenges were enumerated as: waste from ship operations, oil spills, ballast water management, dredging, effluents, water quality, noise, dust, air pollution, and habitat degradation. Another common denominator is the trade of legal and illegal waste through the ports and the associated risks for public and occupational health and the environment, both in the port area and in the hinterland.

On the ground, ports attract thousands of vehicular visits per day, consisting mainly of poorly maintained diesel-heavy commercial vehicles and other polluting equipment. Trucks can spend hours negotiating port traffic congestion, while spewing diesel fumes all the while.

Port-related pollution is also trans-boundary in nature. Globally, discharges of waste and cargo residue into the sea are a serious threat to the marine environment, with shipping accounting for 20% of the global discharge at sea. Reducing pollution of the seas is therefore an important field of international and local action in maritime transport.

Despite these challenges, Ghana's Minister for Environment, Science and Technology (MEST) has pointed out that the environment is still low on the agenda of ports in the sub-region, with the associated dangers of becoming dumping grounds. In fact, past records indicate that there have been serious incidents of toxic waste dumping. Regional ports have also yet to

embrace the international cooperation that is needed on environmental issues.

Most ports in the region lack a clearly defined environmental management structure. Where they do exist, they are not placed among top management levels. For most ports, environmental issues are largely seen as part of the Harbour Master's responsibility. However, the Harbour Master's duty normally entails taking charge of pilotage, and overseeing floating crafts and operations on the waterside; duties very different from environmental protection and management. In other instances, environmental protection is seen only as port area waste management, to be handled under the administration department. With this confusion of roles, implementation of international conventions are weak.

At the same time, the region is particularly vulnerable.

- While the MARPOL convention requires that adequate Port Reception Facilities (PRF) be provided, this is a major challenge. Where reception facilities are available, they are generally inadequate, with only a few exceptions. Currently there is an inefficient collection process, with no records and no verification of declarations, no (non) hazardous separation, no guidelines/monitoring for treatment and disposal. It is thus probable that illegal discharge of ship-generated waste is taking place in the region's seas.
- The region is heavily depended on bulk commodity exports (agriculture, minerals, oil, and gas). As a result, many ports in the region export bulk commodities and oil and receive large amounts of ballast water in return (ships need ballast water to remain stable when they are empty). This places the region at risk as they are potentially receiving harmful invasive organisms into their ecosystem, but there is a lack of resources and capacity to address this threat.

- Ongoing explorations, coupled with recent oil discoveries mean that the threat of large-scale oil spillage has increased, especially due to offshore installation and increased tanker traffic. While ports in the region (together with other oil facility operators) have been working on implementing the necessary conventions to manage this, the efforts have been slow and staggered due to ineffective coordinating structures.

Ports in the region are obliged to implement and enforce IMO conventions in addition to the region's two agreements; the Abidjan Convention and the Abuja MOU (see box 5). Though most countries ratified MARPOL, they lack capacity for legislative reviews to develop compliant domestic regulations. Further, political will is lacking, with attention being focused on port infrastructure renewal and attracting cargoes. There are no specialized projects focused on facilitating the ports in taking up PRF responsibility.

Box 4: Environmental Issues at Tema Port: Challenges and Mitigation

A report presented at the 2nd Africa Ports Environmental Initiative indicated that some of the environmental challenges face by Ghana's Tema port, as:

- The diesel engines at ports, which power ships, trucks, trains, and cargo-handling equipment, emit sulfur oxides (SO₂) and nitrogen oxides. Trucks and cargo handling equipment are polluting with CO₂ and CO. Sandblasting at dry docks produces paint residues full of heavy metals, which are blown into the wind.
- Untreated sewage and storm water running into CHEMU lagoon leads to foul smell in parts of the port, and there are occasional spills from the oil jetty during discharge and bunkering operations.
- Laid up and abandoned vessels which release iron and chemicals to the harbor basin
- End of life electronic waste.
- Traffic congestion and noise pollution.

Some of the measures the port has implemented include:

- Institutional strengthening and capacity building

Application of Polluter Pays Principle (polluter fined and charged and whatever resources expended to clean up billed to the polluter)

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- Port waste management facilities
- Port biological survey of harbor to monitor water quality from ballast
- Biennial oil spillage mock exercises

The Tema waste management facility has been concessioned to Tillbury Environmental Group (TEG) on the Build Operate Own (BOO) model to meet MARPOL ANNEXES I-V (note that only Annexes I-II are compulsory). This is a compulsory use facility and therefore all ships calling at Tema are levied a charge (based on tonnage).

Interventions

In general, environmental laws, directives, and policies are poorly adapted to the situation on the ground. However awareness of environmental issues is now being backed by willingness to act and there are a number of promising interventions being undertaken.

Networking and Collaboration

Africa Ports Authorities have taken on the environmental challenge. The African Ports Environment Initiative (APEI) is a continent-wide initiative aimed at developing co-operative and collaborative action to tackle environmental challenges facing African ports. It's designed to be a platform for sharing information on best practices, raising awareness, and influencing environmental policy. It also aims to build capacity by facilitating exchange programs.

Africa Green Port Initiative

Greening ports is a new and popular benchmark in determining the modernization of world ports and Africa is venturing into the concept. African ports are collaborating with EcoPorts Foundation on implementing the African Agenda "Green Port Africa Initiative", which will set up a common program for Africa that will implement environmental issues in Africa.

Learning Visits

Learning tours are also being used to build capacity. From 10-14 October 2011, Nigerian officers visited their colleagues in Antwerp, Belgium, and Bremen, Germany. This exchange was facilitated by INECE, in collaboration with the involved authorities in Antwerp, Bremen, and Nigeria. The objective of the visits were to learn mutually about the procedures and practice regarding the inspection of international waste shipments in the ports.

Through a combination of presentations, discussions, practical demonstrations, and exercises, the involved officers were acquainted with several essential approaches and the challenges they present.

The future

The efforts to expand ports in the region have not been accompanied by efforts to reduce its environmental impact. Yet, the only logical place for a ship to dispose waste is inside the port. Ships should never leave ports carrying large amounts of waste. Otherwise, we cannot guarantee against pollution of marine and coastal environment. There should be greater effort to raise awareness of the role of ports in marine and coastal environment protection. How well ports do this should be part of the port rating system, beyond the usual metrics of efficiency.

Ports should have a clear policy on garbage and sludge disposal, and should communicate and enforce the policy, as well as environmental services to entering ships. Developing a sound environmental policy and capacity to implement is one intervention that ports can use. Policy approach should incentivize ships to be greener by applying differential rates and discounts for use of environmentally friendly facilities rather than just use of tonnage.

The environmental efforts being led by ports authorities in the region are commendable but there is a lot of work to be done before the issue is adequately addressed.

Countries need to build capacity and political will to develop and implement internationally compliant domestic regulations.

As big businesses come under pressure to green their supply chain, the desire to be part of the global supply chains will probably shift political will and raise the profile of the issue. Until this happens, green activists will need to sustain their efforts to raise awareness and apply pressure for action.

Box 5: International Conventions in Ports pollution

International legal basis: MARPOL 73/78

International Maritime Organisation's (IMO) International Convention for the Prevention of Marine Pollution from Ships (MARPOL) aims to reduce the amount of waste discharged into sea through:

- Elimination of intentional pollution by oil and other harmful substances

- Minimization of accidental discharge by defining which wastes can be discharged at sea

MARPOL requires States to ensure adequate reception facilities in ports for waste that cannot be discharged into the sea ("adequate", meaning without causing undue delay to ships).

International Convention for the Control and Management of Ships' Ballast Water and Sediment (BWC 2004)

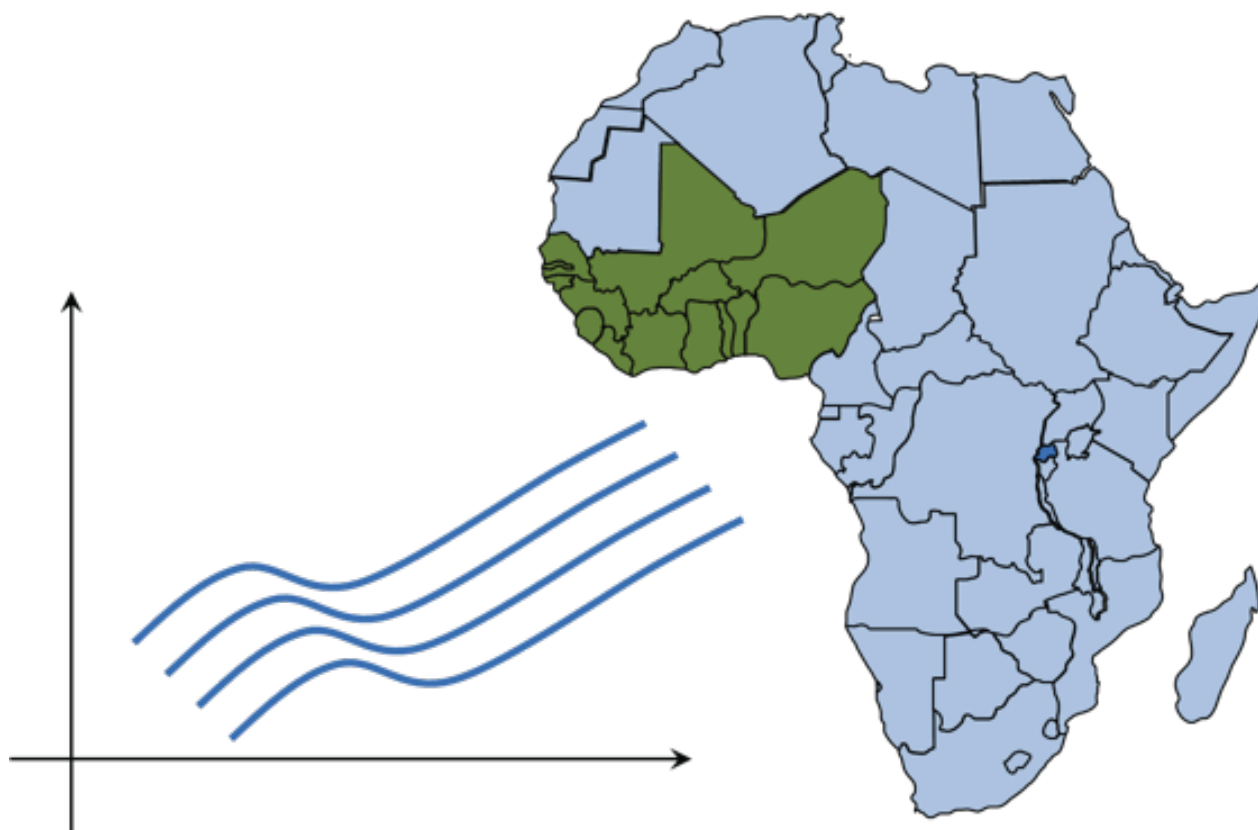
Under the International Convention for the Control and Management of Ships' Ballast Water and Sediment (BWC 2004), ports are required to provide adequate reception facilities to receive ships ballast water and sediments in consistence with international law. This is to prevent, reduce, or eliminate the transfer of harmful invasive aquatic organisms or pathogens through ballast water, one of the greatest threats to marine ecosystems.

The Abidjan Convention

The Abidjan Convention and its related protocol on pollution co-operation, is a comprehensive umbrella agreement for the protection and development of West Africa's marine and coastal environment. It is also the only United Nations Environment Program's Seas Convention in the region. Its implementation has been slow, and although it was adopted in 1981, it has yet to be given any meaning.

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